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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,223	02/14/2006	Wolfgang Zirwas	14541680	6270
21171	7590	11/30/2009	EXAMINER	
STAAS & HALSEY LLP			DAGLAWI, AMAR A	
SUITE 700				
1201 NEW YORK AVENUE, N.W.			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20005			2618	
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			11/30/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/568,223	ZIRWAS, WOLFGANG	
	<b>Examiner</b>	<b>Art Unit</b>	
	AMAR DAGLAWI	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 07/15/2009.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 23-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 23-32 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ .  | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Response to Amendment***

Claims 23-32 are pending in the current application. Claims 1-22 were cancelled. The amendment has been entered.

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 23-32 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 23-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hokao (US 7,272,125 B2) in view of Sugar et al (US 2004/0072546 A1).

With respect to claim 23, Hokao teaches A method, comprising:  
receiving a signal in a receiver station via a first transmitting channel from a sending

station(Fig.5); determining a channel parameter of the first transmitting channel using the receiver station (col.6, lines 32-67); adjusting a symbol parameter of a first data symbol to be transmitted from the receiver station to the sending station via a second transmitting channel, the adjusting based on a function of a value of the channel parameter of the first transmitting channel (col.6, lines 32-67, col.7, lines 1-21); and changing a symbol parameter of a second data symbol to be transmitted from the receiver station to the sending station by a mathematical operation opposite from adjusting of a the symbol parameter of the first data symbol (Fig.3, Fig.5, col.6, lines 32-67, col.7, lines 1-21)

However, Hokao fails to teach the sending station transmits the signal via the first transmitting channel using a first frequency range to the receiver station and the receiver station transmits a second signal via a second transmitting channel using a second frequency range to the sending station which is further taught in the same field of endeavor by Sugar (see Fig.1, par [0054], par [0020]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Hokao (the network station) with the two devices as taught by Sugar so to send and receive signals between the two devices at different channels.

With respect to claim 24, Hokao in view of Sugar further teaches transmitting the first and second data symbols from the receiver station to the sending station; and ascertaining at the sending station the channel parameter of the first transmitting channel determined by the receiver station, based on the first and second data symbol

received at the sending station (col.6, lines 32-67, col.7, lines 1-21, and see also Fig.4, col.7, lines 45-67, col.8, lines 1-35)

With respect to claim 25, Hokao in view of Sugar further teaches the channel parameter of the first transmitting channel is at least one of a phase parameter and an amplitude parameter (Fig.4, col.7, lines 45-67, col.8, lines 1-35)

With respect to claim 26, Hokao in view of Sugar further teaches adjusting includes changing the symbol parameter of the first data symbol to be transmitted from the receiver station by at least one of addition and subtraction of the value of the channel parameter of the first transmitting channel (col.6, lines 32-67, col.7, lines 1-21)

With respect to claim 27, Hokao in view of Sugar further teaches the first and second data symbol transmitted from the receiver station are pilot symbols (col.7, lines 45-67, col.8, lines 1-35)

2. With respect to claim 28, Hokao in view of Sugar further teaches the first and second data symbols transmitted from the receiver station are pilot symbols (col.7, lines 50-67, col.8, lines 1-35)

3. With respect to claim 29, Hokao in view of Sugar further teaches a plurality of available transmitting channels exist for transmission from the sending station to the receiver station, and said receiving, determining, adjusting, transmitting and ascertaining are repeated using each of the available transmitting channels as the first transmitting channel (col.6, lines 32-67, col.7, lines 1-25)

4. With respect to claim 30, Hokao in view of Sugar further teaches the receiver station has a plurality of receiving antennas and/or the sending station has a plurality of sending antennas, and one of the first transmitting channels is situated between one of the sending antennas and one of the receiving antennas (Fig.5, col.7, lines 45-67, col.8, lines 1-46)

With respect to claim 31, Hokao teaches A receiver station for a radio communication system having a sending station; comprising:

5. a receiving unit receiving a signal from the sending station via a first transmitting channel (Fig.5, MS receiving section)); a determination unit determining a channel parameter of the first transmitting channel (Fig.5, col.6, lines 32-67); an adjustment unit changing a symbol parameter of a first data symbol to be transmitted from said receiver station to the sending station via a second transmitting channel, the adjustment unit changing the symbol parameter of the first data symbol based on a function of a value of the channel parameter of the first transmitting channel (Fig.5, col.6, lines 32-67, col.7, lines 1-20) [In the mobile unit the channel switching instruction instructing a channel switching operation from the first channel parameter data to the second channel parameter data]; and a changing unit changing a symbol parameter of a second data symbol to be transmitted from the receiver station to the sending station by a mathematical operation opposite to the changing of the first data symbol (col.7, lines 45-67, col.8, lines 10-46) [the control section (the changing unit) sets the channel parameter data such as the symbol rate, the number of pilot symbols, the number of data symbols]

However, Hokao fails to teach the sending station transmits the signal via the first transmitting channel using a first frequency range to the receiver station and the receiver station transmits a second signal via a second transmitting channel using a second frequency range to the sending station which is further taught in the same field of endeavor by Sugar (see Fig.1, par [0054], par [0020]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Hokao (the network station) with the two devices as taught by Sugar so to send and receive signals between the two devices at different channels.

6. With respect to claim 32, Hokao teaches A sending station for a radio communication system having at least one receiver station, comprising:  
a transmission unit sending a signal via a first transmitting channel to the receiver station (Fig.5, MS transmitting section)); a receiver unit receiving from the receiver station a first data symbol having a first symbol parameter adjusted for communication as a function of a value of a channel parameter of the first transmitting channel and a second data symbol having a second symbol parameter adjusted for communication according to a mathematical operation opposite to the adjusting of the first symbol parameter; and an ascertainment unit ascertaining the channel parameter based on the first and second data symbol received from the receiver unit (Fig.5, col.6, lines 32-67, col.7, lines 1-20) [Fig.5, teaches the switching unit switches from a first channel

parameter to a second channel parameter in the mobile station and in the base station switching from a second channel parameter. However, the examiner believes that switching involves the use of some mathematical operator of some sort that shall be opposite to the first such a transpose operator]

However, Hokao fails to teach the sending station transmits the signal via the first transmitting channel using a first frequency range to the receiver station and the receiver station transmits a second signal via a second transmitting channel using a second frequency range to the sending station which is further taught in the same field of endeavor by Sugar (see Fig.1, par [0054], par [0020]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Hokao (the network station) with the two devices as taught by Sugar so to send and receive signals between the two devices at different channels.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMAR DAGLAWI whose telephone number is (571)270-1221. The examiner can normally be reached on Monday- Friday (7:30 AM- 5:00 AM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NGUYEN DUC can be reached on 571-272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amar Daglawi

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Examiner  
Art Unit 2618

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